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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Freese et al. Confirmation No.: 8346
Serial No.: 10/661,917 Examiner: Daborah Chacko Davis
Filed: September 11, 2003 Group Art Unit: 1795
For: METHODS FOR MASTERING MICROSTRUCTURES THROUGH A SUBSTRATE USING NEGATIVE PHOTORESIST

January 31, 2008

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APPELLANTS' AMENDED "SUMMARY OF CLAIMED SUBJECT MATTER" SECTION FOR BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37

Sir:

This Amended "Summary of Claimed Subject Matter" section is being filed in response to the Notification of Non-Compliant Appeal Brief ("Notification") mailed January 24, 2008, and replaces the "Summary of Claimed Subject Matter" section of Appellants' Brief on Appeal filed January 7, 2008. In particular, the "Summary of the Claimed Subject Matter" section has been amended to supply references to the specification by page and line number for all of the claims. As stated in the Notification, the entire brief is not required, only the section found defective.

Summary of the Claimed Subject Matter

Some embodiments of the present invention according to independent Claim 1 provide a method of fabricating an array of microlenses (e.g., Figure 13A, microlenses **132**, specification Page 17, lines 4-9) by scanning a radiation beam (e.g., Figure 13A, radiation beam **820**, specification Page 17, lines 4-9) at varying amplitude through a substrate (e.g., Figure 13A, substrate **800**, specification Page 17, lines 4-9) that is transparent thereto into a negative photoresist layer (e.g., Figure 13A, negative photoresist layer **1310**, specification Page 17, lines 4-9) on the substrate to image the array of microlenses in the negative photoresist layer, as illustrated in Figure 13A.

Some embodiments of the present invention according to Claim 3 provide that the negative photoresist layer (e.g., Figure 17, negative photoresist layer **1310**, specification Page 19, lines 9-19) is thicker than the array of microlenses (e.g., Figure 17, microlenses **1732**, specification Page 19, lines 9-19) and wherein scanning comprises scanning a radiation beam (e.g., Figure 17, radiation beam **822**, specification Page 19, lines 9-19) at varying amplitude

through a substrate (e.g., Figure 17, substrate **800**, specification Page 19, lines 9-19) that is transparent thereto into the negative photoresist layer on the substrate to image a buried array of microlenses in the negative photoresist layer, adjacent the substrate, as illustrated in Figure 17.

Other embodiments of the present invention according to Claim 4 provide that the microlenses (e.g., Figure 17, microlenses **1732**, specification Page 19, lines 9-19) include a base and a top that is narrower than the base, as illustrated in Figure 17, wherein scanning comprises scanning a radiation beam (e.g., Figure 17, radiation beam **822**, specification Page 19, lines 9-19) at varying amplitude through a substrate (e.g., Figure 17, substrate **800**, specification Page 19, lines 9-19) that is transparent thereto into a negative photoresist layer (e.g., Figure 17, negative photoresist layer **1310**, specification Page 19, lines 9-19) on the substrate to image the array of microlenses in the negative photoresist layer with the bases adjacent the substrate and the tops remote from the substrate, as illustrated in Figure 17.

Other embodiments of the present invention according to Claim 5 provide that the negative photoresist layer (e.g., Figure 18, negative photoresist layer **1310**, specification Page 19, lines 20-28) is of variable thickness thereacross, as illustrated in Figure 18, wherein a minimum thickness of the negative photoresist layer is thicker than the microlenses (e.g., Figure 18, microlenses **1832**, specification Page 19, lines 20-28), wherein scanning comprises scanning a radiation beam (e.g., Figure 18, radiation beam **822**, specification Page 19, lines 20-28) at varying amplitude through a substrate (e.g., Figure 18, substrate **800**, specification Page 19, lines 20-28) that is transparent thereto into the negative photoresist layer on the substrate to image buried microlenses beneath the negative photoresist layer, adjacent the substrate, that are independent of the variable thickness of the negative photoresist layer, as illustrated in Figure 18.

Yet other embodiments of the present invention according to Claim 6 provide a method wherein the negative photoresist layer (e.g., Figure 19, negative photoresist layer **1310**, specification Page 19, line 29-Page 20, line 4) includes impurities (e.g., Figure 19, impurities **1910**, specification Page 19, line 29-Page 20, line 4) thereon, remote from a substrate (e.g., Figure 19, substrate **800**, specification Page 19, line 29-Page 20, line 4), wherein the negative photoresist layer is thicker than the microlenses (e.g., Figure 19, microlenses **1832**, specification Page 19, line 29-Page 20, line 4) and wherein scanning comprises scanning a radiation beam (e.g., Figure 19, radiation beam **822**, specification Page 19, line 29-Page 20, line 4) at varying amplitude through the substrate that is transparent thereto into the negative photoresist layer on the substrate to image buried microlenses in the negative photoresist layer, adjacent the substrate, that are not distorted by the impurities, as illustrated in Figure 19.

Yet other embodiments of the present invention according to Claim 8 provide that the negative photoresist layer is on a cylindrical platform (e.g., Figure 3, cylindrical platform **100**, specification Page 8, lines 19-28) and wherein scanning comprises rotating the cylindrical platform about an axis thereof (e.g., Figure 3, axis **102**, rotation arrow **104**, specification Page 8, lines 19-28) while simultaneously axially rastering the radiation beam (e.g., Figure 3, radiation beam **120**, axial rastering arrow **124**, specification Page 8, lines 19-28) at varying amplitude through the substrate that is on the cylindrical platform across at least a portion of the negative photoresist layer to image the array of microlenses (e.g., Figure 3, microlenses **132**, specification Page 8, lines 19-28) in the negative photoresist layer.

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It is not believed that an extension of time and/or additional fee(s) are required, beyond those that may otherwise be provided for in documents accompanying this paper. In the event, however, that an extension of time is necessary to allow consideration of this paper, such an extension is hereby petitioned for under 37 C.F.R. §1.136(a). Any additional fees believed to be due in connection with this paper may be charged to Deposit Account No. 50-0220.

Respectfully submitted,

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CERTIFICATION OF TRANSMISSION

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4) to the U.S. Patent and Trademark Office on January 31, 2008.

Susan E. Freedman
Date of Signature: January 31, 2008